

Abstract

The present invention relates to isolated immunogens and their use in the treatment of diseases that are treatable with neutralization of IL-13, such as COPD, asthma and atopic disorders such as hayfever, contact allergies and atopic dermatitis. In particular the invention relates to the neutralization of the biological effects of IL-13 by raising an immune response against the IL-13 by vaccination of a mammal with immunogens comprising the native or mutated amino acid sequence of IL-13, and foreign T-helper epitopes either inserted in, or attached to the IL-13 sequence or present in carrier polypeptides. Also provided by the present invention are DNA vaccines that comprise a polynucleotide sequence that encodes the immunogens of the present invention. The invention further relates to pharmaceutical compositions comprising such immunogens and their use in medicine and to methods for their production.